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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/795,796

03/08/2004

Jianhua Sun

851663.465

7697

30423 7590 05/04/2009

STMICROELECTRONICS, INC.

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EXAMINER

KHAN, ASHER R

ART UNIT

PAPER NUMBER

2621

MAIL DATE

DELIVERY MODE

05/04/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/795,796	Applicant(s) SUN ET AL.	
	Examiner ASHER KHAN	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-9 and 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1, 12 and 19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1-3, 5-6,12-14, 16, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,226,443 B1 to Morioka et al "Morioka" in view of KR Application No. 10-1996-0072736 to Jeong-Gyu Kim "Jeong"

As to claims 1, 12 and 19, Morioka discloses a method of decoding audio data, encoded in multiple DIF blocks in a Digital Video (DV) frame of a DV data stream, and outputting said audio data as a PCM frame, the method comprising:

- (i) fetching a single Digital Interface Frame (DIF) block from the DV data stream, the DIF block having a plurality of bytes including a first byte and a last byte. (Fig. 19)(Col. 18, lines 45-67; col. 19, lines 1-35);
- (ii) de-shuffling the first byte in the single DIF block to convert the first byte in the PCM frame (Fig. 19)(Col. 18, lines 45-67; col. 19, lines 1-35);
- (iii) repeating (ii) on subsequent bytes of data of the single DIF block until the last byte

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in the single DIF block is de-shuffled(Fig. 19)(Col. 18, lines 45-67; col. 19, lines 1-35);

(iv) repeating (i) to (iii) for each subsequent DIF block of the multiple DIF blocks in the DV frame(Fig. 19)(Col. 18, lines 45-67; col. 19, lines 1-35); and

(v) writing the de-shuffled data into the PCM frame for output if after each DIF block of the multiple DIF blocks of the DV frame have been fetched from the DV data. (Fig. 19)(Col. 18, lines 45-67; col. 19, lines 1-35);

Morioka does not expressly disclose that index (n) is used in deshuffling.

Jeong discloses that index (n) (word number (WN) is used in deshuffling (Paragraphs 31-36 and 52-53)

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Morioka with the teachings of Jeong. Motivation would have been to restore audio data after the process of deshuffling to the original sample number.

As to claims 2 and 13, Morioka and Jeong disclose everything claimed as applied in claim 1 above. In addition Morioka discloses wherein output is in PCM frame (Fig. 19)(Col. 18, lines 45-67; col. 19, lines 1-35). But Morioka does not expressly disclose index (n) of data sample is dependent on parameters of the DV data.

Jeong discloses index (n) of data sample is dependent on parameters of the DV data (paragraphs 32-36).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Morioka with the teachings Jeong. Motivation to combine would have been to properly deshuffle audio data, so that no audio sample is lost.

As to claims 3 and 14, Morioka and Jeong disclose everything claimed as applied in claim 1 above. However Morioka as modified does not expressly disclose the parameters having track number; sync block number and byte position within the DIF block (b).

Jeong discloses wherein the parameters include:
track number (t) (14);
sync block number (s) (14); and
byte position within the DIF block (b) (Morioka, DVC, col. 7, lines 1-20) (14).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Morioka as modified with the teaching of Jeong. Motivation would have been to synchronize track number and sync block number to improve operation speed.

As to claims 5 and 16, Morioka and Jeong disclose everything claimed as applied in claim 1 above. In addition Jeong further discloses wherein s is incremented by 1 each time a new DIF block is received, and is reset to zero every nine DIF blocks (Constitution).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Morioka as modified with the teaching of Jeong. Motivation to combine would have been to count DIF blocks.

As to claims 6 and 17, Morioka and Jeong disclose everything claimed as applied in claim 1 above. In addition Jeong further discloses wherein t is incremented by 1 every nine DIF blocks (Constitution and 38).

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At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Morioka as modified with the teaching of Jeong. Motivation to combine would have been to be able to deshuffle all the tracks.

3. Claim 7-9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,226,443 B1 to Morioka et al "Morioka" in view of KR Application No. 10-1996-0072736 to Jeong-Gyu Kim "Jeong" and in view of Applicant's Admitted Prior Art "AAPA"

As to claim 7, Morioka and Jeong disclose everything claimed as applied in claim 1 above. However Morioka and Jeong do not expressly disclose wherein the DV data may be encoded to one of a plurality of different video systems, such as 525/60 (2-channel or 4-channel) or 625/50 (2-channel or 4-channel) (Admitted prior art coding, 0013, 0017, 0030).

AAPA discloses wherein the DV data may be encoded to one of a plurality of different video systems, such as 525/60 (2-channel or 4-channel) or 625/50 (2-channel or 4-channel) (Admitted prior art coding, 0013, 0017, 0030).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Morioka and Jeong as modified with the teaching of AAPA.

Motivation to combine would have been to allow deshuffling in different video systems.

As to claim 8, Morioka and Jeong disclose everything claimed as applied in claim 1 above. However Morioka and Jeong do not expressly disclose the table of constants.

AAPA teaches table of constants(paragraph 0017).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Morioka and Jeong as modified with the teaching of AAPA.

Motivation to combine would have been to allow usage of several different constants so that different outputs of audio could be achieved.

As to claims 9 and 18, Morioka and Jeong disclose everything claimed as applied in claim 1 above. However Morioka and Jeong do not expressly disclose inverse function.

AAPA discloses inverse function of " $f(n)$ " in paragraph 0020 and in figure 4 and equations used to derive inverse function from " $f(n)$ " in of paragraph 0012.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Morioka and Jeong as modified with the teaching of AAPA. Motivation to combine would have been to provide inverse function so that deshuffling could be achieved.

4. Claim 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,226,443 B1 to Morioka et al "Morioka" in view of KR Application No. 10-1996-0072736 to Jeong-Gyu Kim "Jeong" and in further view of U.S. Patent 6,876,814 B1 to Le Dantec.

As to claims 4 and 15, Morioka and Jeong disclose everything as applied in claim 1 above. Jeong further discloses wherein for t (41) and s (40) are set to zero (40-41). Morioka and Jeong as modified do not expressly disclose a first DIF block of the DV frame.

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Le Dantec discloses a first DIF block of the DV frame set to zero (Fig. 3) and a DIF block counter is set to zero (Col. 11, lines 45-50)

At the time of invention it, it would have been obvious to a person of ordinary skill in the art to modify Morioka and Jeong as modified with the teaching of Le Dantec. Motivation would have been to reset values to zero after obtaining certain amount of data required for processing at a time.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASHER KHAN whose telephone number is (571)270-5203. The examiner can normally be reached on 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571)272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621

/A. K./
Examiner, Art Unit 2621